

AMERICAN MUSEUM *Novitates*

PUBLISHED BY THE AMERICAN MUSEUM OF NATURAL HISTORY
CENTRAL PARK WEST AT 79TH STREET, NEW YORK, NY 10024
Number 3399, 26 pp., 1 figure, 1 appendix March 27, 2003

An Annotated Catalog of the African Primate Genera *Colobus* and *Procolobus* (Cercopithecidae: Colobinae) in the Collections of the American Museum of Natural History

RUTH O'LEARY¹

ABSTRACT

The Department of Mammalogy of the American Museum of Natural History houses over 300 specimens of African colobus monkeys (genera *Colobus* and *Procolobus*). The collection consists of red, olive, and black-and-white colobus (*Procolobus badius*, *P. verus*, *Colobus angolensis*, *C. guereza*, *C. polykomos*, *C. satanas*, and *C. vellerosus*). Taxonomic notes, pelage descriptions, and range are noted for each species and subspecies. For each specimen, the following data are given: catalog number, date collected or recorded, sex, age, nature of specimen, locality, name of collector, and measurements.

INTRODUCTION

The American Museum of Natural History currently houses over 300 specimens of African colobus monkeys. Herbert Lang and James P. Chapin collected the majority of the red colobus and over half of the black-and-white colobus during the American Museum Congo Expedition (1909–1915). All of these specimens were collected from the northeast

of the Democratic Republic of the Congo, near Faradje. A map of the collecting sites of the expedition was published by Allen (1925). The remainder of the colobus collection represents a spotty sampling from selected geographic areas.

The collection consists mostly of specimens preserved as skins and skulls. There are also skeletons, casts, wet specimens, and mounted specimens present. The collection

¹ Scientific Assistant, Division of Vertebrate Zoology (Mammalogy), American Museum of Natural History. e-mail: oleary@amnh.org.

contains the type series of *Colobus langi* (Allen, 1925), consisting of the holotype (Lawrence, 1993) and two paratypes. This material is listed herein under the heading for *Procolobus badius ellioti*, currently regarded by Napier (1985) as a subjective senior synonym.

The classification used in this catalog for the black-and-white colobus follows Oates et al. (1994) in separating these species at the generic level from the red and the olive colobus, and in recognizing five species. At the subspecific level, the classification used by Napier (1985) is followed, except where noted. All five species of black-and-white colobus are represented in the museum collection. These are *Colobus angolensis*, *C. guereza*, *C. polykomos*, *C. satanas*, and *C. verus*.

The taxonomy of the red colobus is unstable and has yet to be fully resolved. The classification used in this catalog is conservative and follows Oates et al. (1994) at the generic level. The red colobus is recognized as a subgenus, *Piliocolobus* of the genus *Procolobus*. At the specific level, the catalog follows Napier (1985) in recognizing only two species, *P. badius* and *P. kirkii*. *Procolobus kirkii* is considered by many authors to be a valid species, and although *P. badius* may in fact be comprised of several species, it is recognized here as a single species. This arrangement conflicts with Groves (1993), who recognizes four species, and others (Dandelot, 1971; Delson et al., 1982).

Seven recognized subspecies or populations of red colobus are represented in the collection: *Procolobus (Piliocolobus) badius badius*, *P. b. bouvieri*, *P. b. ellioti*, *P. b. ousataleti*, *P. b. rufomitatus*, *P. b. tephrosceles*, and *P. b. tholloni*. A second species of red colobus, *P. kirkii*, is not represented in the AMNH collection.

Only one species of olive colobus is recognized, *Procolobus (Procolobus) verus*, of which there are two specimens in the collection.

The primary purpose of this catalog is to record and present the data on all the colobus specimens in the AMNH. Recent reviews of colobus taxonomy have raised several subspecies to specific status (e.g., Groves, 2001). However, since no consensus has been

reached and since this catalog is not meant as a review of colobus taxonomy, I have followed a conservative classification throughout. Similarly, pelage descriptions refer only to specimens in the collection, not to the species or subspecies as a whole. It is hoped that the information contained here will be a useful resource for colobus studies and assist in the resolution of the taxonomy of these primates.

TAXONOMIC NOTES

In 1781, Pennant published the first description of two colobus species—the “full-bottom monkey” (the black-and-white colobus) and the “bay monkey” (the red colobus). The descriptions were based on one specimen of each species in the Leverian Museum, London, brought from Sierra Leone. The type specimens were subsequently lost during the dispersal of the Leverian collection. Later authors (e.g., Rochebrune, 1886–1887) suggested that Pennant’s description and figures were unreliable. These factors, among others, contributed to the ensuing confusion regarding colobus nomenclature and classification.

The taxonomy of the African colobus has undergone a number of changes in the more than two hundred years since Pennant’s publication. The debates center on the number of genera that should be used to represent the African colobus and the number of species that should be used to reflect the diversity of the red colobus and the black-and-white colobus.

The black-and-white, red, and olive colobus are separated at the generic and subgeneric levels. Initially, all three were considered to be members of a single genus (Martin, 1841) but subsequent research has revealed significant differences between each group. Pocock (1936) examined the external characters of the red colobus and compared the results to work he had carried out previously on black-and-white colobus (Pocock, 1926). His data led him to suggest that the two should be distinguished generically. Hill (1952) conducted studies of the external and visceral anatomy of the olive colobus and concluded that his findings suggested a reason to separate *verus* (the olive colobus)

from *badius* (the red colobus). Many similarities between the red and olive colobus were being uncovered at this time and there was a need to represent these shared features in the taxonomy. Hill and Booth (1957) suggested uniting *Procolobus* (the olive colobus) and *Piliocolobus* (the red colobus) within the genus *Procolobus* based on their distinctive shared features. These features include sexual swelling in the female, the presence of a perineal organ in the male, separate ischial callosities in the female, and small larynx (Pocock, 1936; Hill, 1952; Hill and Booth, 1957; Kuhn, 1967, 1972). All of these features were observed to be common to the red and the olive colobus, and to distinguish both from the black-and-white colobus. In addition, Clutton-Brock (1974) and Struhsaker and Oates (1975) noted significant differences in the behavior and ecology of the red and the black-and-white colobus in the Kibale Forest, Uganda, which also suggested that the two groups might not be members of the same genus.

Currently, Oates et al. (1994) and others (Brandon-Jones, 1984; Strasser and Delson, 1987) agree that the red and the olive colobus monkeys are more closely related to each other than either is to the black-and-white colobus. These authors recognize two genera—*Colobus*, for the black-and-white colobus and *Procolobus* to represent the red and the olive colobus. *Procolobus* is further subdivided into two subgenera, *Piliocolobus* (red) and *Procolobus* (olive). This follows an arrangement suggested by Hill and Booth (1957). It is also the arrangement followed in this catalog.

The taxonomy of the black-and-white colobus has been worked out with some resolution. At least four and, more recently, five distinct species are recognized (Oates et al., 1994; Groves, 2001). The elevation of *vellerosus* to specific status was suggested by Dandelot (1971) and investigated further by Oates and Trocco (1983), whose findings led them to conclude that *vellerosus* is a distinct species.

The taxonomy of the red colobus at specific level has yet to be resolved with satisfaction. The same 14 forms are recognized by many authors (Rahm, 1970; Dandelot, 1971; Napier, 1985). However, there is no

agreement yet on which of these should be assigned specific or subspecific status. It is generally agreed that the Zanzibar red colobus, *P. kirkii*, is sufficiently distinct morphologically and ecologically from the other red colobus to be distinguished at the specific level (Verheyen, 1962; Napier, 1985).

A comparison of classifications for the red colobus can be found in Oates et al. (1994), while Groves (2001) contains a more recent classification. The number of species used to describe the group varies considerably. Rahm (1970) recognized only one species, Dandelot (1971) eight species, and Napier (1985) two species. More recently, Colyn (1991) suggested that the subspecies *elliotti* may actually consist of four distinct subspecies (*langi*, *lulindicus*, *foai*, and *semlikiensis*) together with subspecific hybrids. Groves (2001) recognized nine species.

There has been little resolution to this subject, however, and Oates et al. (1994) observed that an appropriate classification may not be reached until further comprehensive research is carried out.

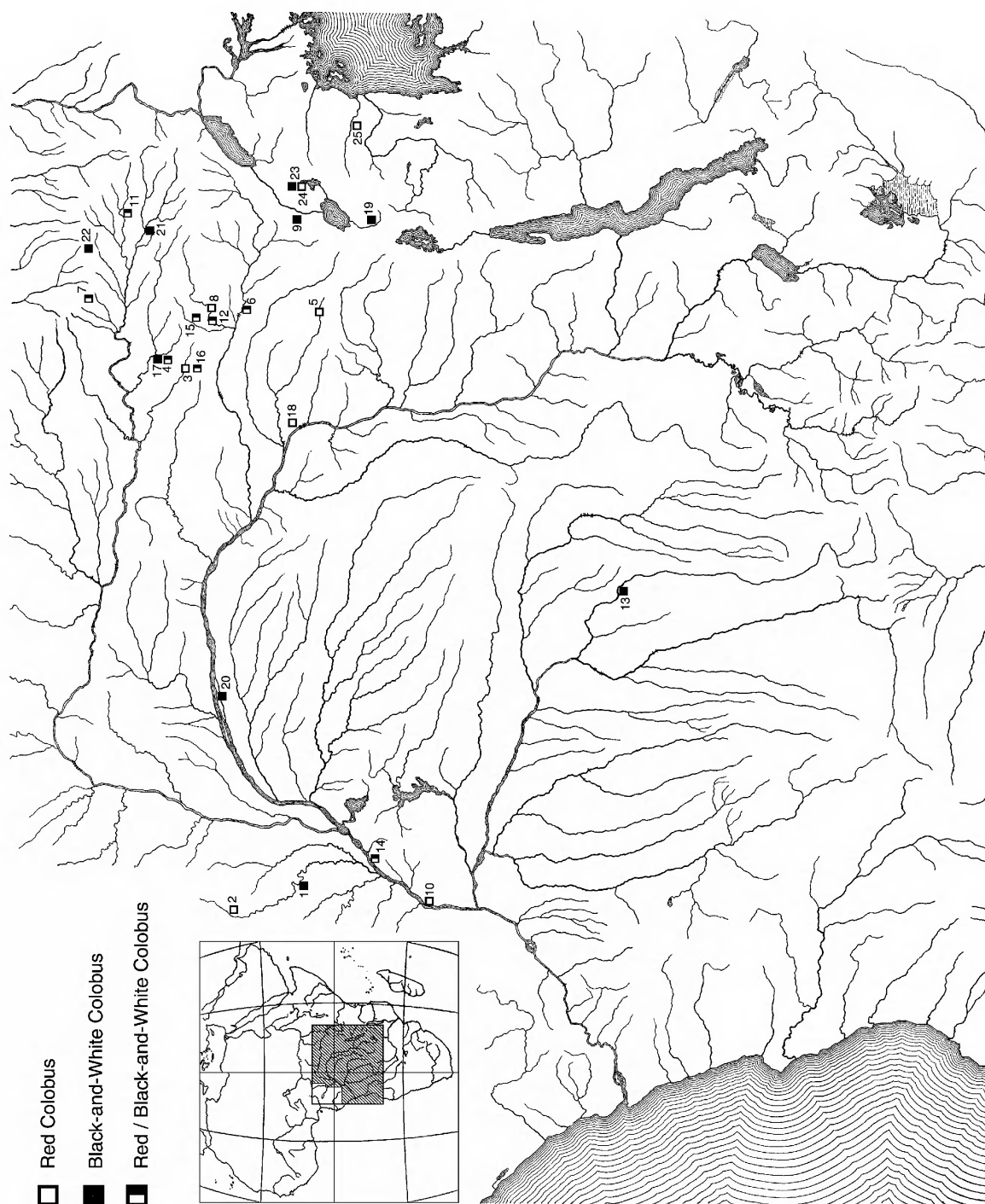
There is only one recognized species of olive colobus, *Procolobus* (*Procolobus*) *verus*.

FORMAT OF THE CATALOG

The African colobus collection in the AMNH is arranged according to genus and subgenus; the two genera are *Colobus*, the black-and-white colobus, and *Procolobus*, including the subgenera *Procolobus* (the olive colobus) and *Piliocolobus* (the red colobus). This catalog followed the format used in *An annotated catalogue of Malagasy primates*. . . (Buettner-Janusch and Tattersall, 1985). For each level of classification, information was given under the following headings:

TAXONOMIC NOTES: As discussed above, due to the unstable nature of red colobus systematics in particular, there are a number of different classifications proposed at both the specific and subspecific level. Under this heading, alternative classifications of the groups and the opinions of different authors are presented.

PELAGE NOTES: Different formats of description were used for the red and the black-



and-white colobus in order to best describe features of the pelage of each group. For the red colobus, a description of coat coloration was given for each subspecies if relevant, followed by the distinguishing characteristics of the pelage of each subspecies. Wherever possible, the pelage description followed this order: head, cheeks, nape, shoulders, back, sides, underparts, forelimbs, hind limbs, tail. In the case of the black-and-white colobus, general pelage descriptions were outlined for each species. The key formatted by Napier (1985) was used to distinguish subspecies in *C. angolensis* and *C. guereza*. Napier's key used the most appropriate features of the pelage to describe the variation in each subspecies. As mentioned previously, the pelage descriptions referred only to the specimens in the AMNH collection.

RANGE OF SPECIMENS: The distribution of the AMNH specimens was noted for each group, followed by the range of the subspecies as a whole according to the literature.

SPECIMENS: A species list was given in the appendix for each subspecies.

SPECIES LISTS

Eight columns were used to describe each taxon in this collection, under the following headings:

Catalog Number: The number assigned by the museum to each specimen.

Date: This was the date of collection of wild-caught specimens or, in the case of zoo specimens, the date on which they were recorded in the permanent catalog of the AMNH.

Sex and Age: Information on sex was taken from the field tag and confirmed from the actual specimen whenever possible. Three age classes were recorded: adult, juvenile, and infant. In four instances, the collector's

tag noted a specimen as an embryo. Following Napier (1985), an adult was defined as having complete permanent dentition. Adults included individuals whose canines were not fully grown. An infant was defined as having entirely deciduous dentition, without M1 erupted. A juvenile included all stages of development between adult and infant, as well as individuals with nonerupted M3. For some of the specimens without skulls, the age was inferred from the skin size. In these cases, the age was enclosed in parentheses.

Description: Skull, skin, and skeleton were noted when present. Skull included cranium and mandible; specimens with anything less were noted as partial skull. Skin denoted whole skin, either flat or mounted.

Locality: Data were taken from field tags, and the localities were verified in a modern atlas. Field notes and gazetteers of the original collectors were also used as references for locality information. When available, the altitude of the locality was also included. Allen (1925) included a map of localities from the Lang and Chapin expedition which was useful for many of the specimens in this collection. If information was not available, or if the specimen was taken from a zoo, "No Data" was entered in this column.

In the case of one species and three subspecies (i.e., *Colobus polykomos*, *C. angolensis cottoni*, *C. guereza guereza*, and *C. g. kikuyuensis*) specimens without exact locality data were included in the list. This was done when the pelage characters corresponded accurately with the descriptions given by Napier (1985) and Dandelot (1971) and with the other specimens of that species or subspecies in the collection.

The Democratic Republic of the Congo was abbreviated throughout as DRC. This country was known as the Belgian Congo at

←

Fig. 1. Collection localities in the Congo Basin. ■ represent localities where black-and-white colobus were collected, □ represent localities where red colobus were collected. Localities where both red, and black-and-white colobus were collected are marked with a ■. The localities shown on the map are as follows: **Congo (Brazzaville):** 1. Makoua, 2. Ouesso. **Democratic Republic of the Congo:** 3. Abawe, 4. Akenge, 5. Angumu, 6. Avakubi, 7. Bafuka, 8. Bafwabaka, 9. Beni, 10. Bolobo, 11. Faradje, 12. Gamangui, 13. Kananga, 14. Lukolela, 15. Medje, 16. Niapu, 17. Poko, 18. Risimu, 19. Rutshuru, 20. Ukaturaka, 21. Vankerckhovenville, 22. Yakuluku. **Uganda:** 23. Kibale Forest, Kanyawara, 24. Kibale Forest, near Dubona camp, 25. Malabigambo Forest.

the time most of the specimens were collected. It was later called Zaire. The Republic of Congo was noted as Congo (Brazzaville) to distinguish the two countries. This country was formerly known as French Congo.

Remarks: In this column the name of the collector was listed, along with the original field number of the specimen. All zoo specimens were from the NYZS (New York Zoological Society) and were noted accordingly.

Measurements: The measurement column lists data taken from the collector's field tag and includes total length, tail, hind foot, and ear length. The measurements were given in millimeters for most specimens and were included in parentheses in inches if originally measured as such by the collector.

Specimens taken from zoos or without sufficient data to enable identification at the subspecific level are included at the end of the appendix, nos. 22–25.

GAZETTEER

Geographic coordinates for the majority of the collecting localities were listed in the gazetteer. A map of the central African localities (fig. 1) included the distributions of the specimens collected from that area.

GENUS *COLOBUS* ILLIGER, 1811

TAXONOMIC NOTES: The genus *Colobus* represents only the black-and-white colobus monkeys. For some time, four species were recognized: *Colobus angolensis*, *C. guereza*, *C. polykomos*, and *C. satanas*. However, Oates and Trocco (1983) suggested elevating *C. polykomos vellerosus* to specific status based on their study of vocalizations, cranial dimensions, coat pattern, and geographical distribution. Following their findings, five species of black-and-white colobus are recognized in this catalog.

PELAGE NOTES: The five species of the genus *Colobus* were easily identified by their black-and-white or all black (*C. satanas*) coats. The black-and-white colobus are large monkeys and have long tails which in *C. guereza* are tufted. The infant pelage contrasts markedly with the adult pelage, being completely white at birth in all species except *C. satanas*, whose coat is brown at birth (Oates et al., 1994). Each species has dis-

tinctive pelage characters; for example, *C. angolensis* has shoulder hairs or epaulettes, which readily distinguish it from other *Colobus* species. The various forms of these features were also used to identify subspecies.

RANGE OF SPECIMENS: The specimens of the genus *Colobus* in the museum were collected from Liberia, Ivory Coast, Cameroon, and Gabon in the west and across the continent from Congo (Brazzaville) to Ethiopia and south to Tanzania. The entire range of black-and-white colobus is more widespread, from Guinea Bissau in the west, including northeastern Angola and possibly Zambia to the south and Sudan and the Central African Republic to the north (Dandelot, 1971; Oates and Trocco, 1983; Napier, 1985).

Colobus angolensis Sclater, 1860

TAXONOMIC NOTES: Rahm (1970) and Napier (1985) recognized eight subspecies. Dandelot (1971) recognized only six, synonymizing *adolfifriederici* with *ruwenzorii* and *palliatu*s with *sharpei*. Groves (2001) recognized the same six subspecies as Dandelot (1971) and included an unnamed subspecies from the northern part of the Mahale mountains, east of Lake Tanganyika. This catalog followed Napier (1985) in maintaining the separate status of *adolfifriederici* and *ruwenzorii* and of *palliatu*s and *sharpei*.

PELAGE NOTES: The long white shoulder hairs, which are continuous with the white hairs of the cheeks and throat, distinguish *Colobus angolensis* from other *Colobus* species. Some subspecies have a white brow band. There is no white mantle and the tail is untufted. The proximal portion of the tail is black and the distal portion is white or grizzled. The proportion of the grizzled part of the tail varies in length according to subspecies. Napier (1985) used features such as the brow band, epaulettes, pubic patch, and tail coloration to identify subspecies; that format is followed here.

RANGE OF SPECIMENS: The *Colobus angolensis* specimens in the AMNH were collected from areas across northern DRC, Uganda, and southwestern Tanzania. *Colobus angolensis* is distributed across mainland Africa from southern Congo (Brazzaville),

northeastern Angola, DRC (excluding the northwest and southeast regions), Rwanda, Uganda, and Tanzania and is also found at the Kenyan coast (Dandelot, 1971; Napier, 1985; Groves, 2001).

Colobus angolensis adolfifriederici
Matschie, 1914b

TAXONOMIC NOTES: Dandelot (1971) considered *adolffriederici* to be synonymous with *ruwenzorii*. He proposed that the only distinction between the two forms is in pelage density; *adolffriederici*, living at higher altitudes than *ruwenzorii*, has a longer pelage. Hull (1979) also united *adolffriederici* with *ruwenzorii* based on craniometric studies. Rahm (1970), however, did not agree, contesting that there are significant differences between the two in shoulder hairs and in tail coloration. Napier (1985) also noted distinctions in the pelage between the two forms, including less profuse epaulettes in *adolffriederici* (mentioned by Rahm, 1970) and a broader white pubic patch in *ruwenzorii*. Groves (2001) united the two subspecies. Given the uncertainty, *adolffriederici* and *ruwenzorii* are treated in the catalog as separate subspecies in line with following a conservative classification.

PELAGE NOTES: There is only one skin specimen of *adolffriederici* in the collection. Narrow brow band, epaulettes less profuse than those of *C. a. angolensis*. Pubic patch small and grizzled. Tail almost entirely black, distal 15% grizzled.

RANGE OF SPECIMENS: Southern Uganda. The distribution of the subspecies is eastern DRC, Rwanda, and southwestern Uganda (Napier, 1985). Rahm (1970) extended the distribution to Minziro forest in Tanzania, which is just over the border with Uganda.

SPECIMENS: Appendix 1, no. 1.

Colobus angolensis angolensis Sclater, 1860

PELAGE NOTES: Brow band absent, epaulettes long. Approximately 25% of the distal portion of the tail is grizzled.

RANGE OF SPECIMENS: Western and southern DRC. The subspecies is found in northeastern Angola and DRC (Rahm, 1970; Dandelot, 1971) from the left bank of the Congo

and Lomani Rivers to the southern border of Katanga (Dandelot, 1971).

SPECIMENS: Appendix 1, no. 2.

Colobus angolensis cottoni Lydekker, 1905

PELAGE NOTES: Brow band absent, epaulettes short, not very profuse, pubic region entirely black. Tail black at base, grizzled for the remaining 80%.

RANGE OF SPECIMENS: All of the specimens for which there are locality data available are from northeastern DRC, which is the range of the subspecies noted by Rahm (1970) and Dandelot (1971). The last two specimens in the list do not have locality data. However, Allen (1925) included them as *C. a. cottoni*, and the pelage markings of the two specimens are comparable to the rest of the collection.

SPECIMENS: Appendix 1, no. 3.

Colobus angolensis ruwenzorii
Thomas, 1901

TAXONOMIC NOTES: See notes for *C. a. adolfifriederici*.

PELAGE NOTES: There are two skin specimens of *ruwenzorii* in the museum collection, only one of which is complete. The following description is based on that skin. Long, dense pelage. Narrow brow band, long epaulettes, broad grizzled pubic patch. Tail almost all black, distal 5% grizzled.

RANGE OF SPECIMENS: Ruwenzori Mountains. This is the range of the subspecies according to Rahm (1970) and Napier (1985). Dandelot (1971) and Groves (2001) extended the range of *ruwenzorii*, as they have united it with *adolffriederici*.

SPECIMENS: Appendix 1, no. 4.

Colobus angolensis sharpei Thomas, 1902

TAXONOMIC NOTES: Dandelot (1971) united *sharpei* with *palliatu*s for the same reason he united *adolffriederici* with *ruwenzorii*; he argued that increased pelage density in *sharpei* is the only distinction between the two. Groves (2001) also untied the two. Napier (1985), however, noted various other differences in the pelage of the two forms, and Hull (1979) suggested keeping *sharpei* and *palliatu*s separate pending further study. The

two are considered separate subspecies in this catalog.

PELAGE NOTES: Long pelage, distinct, broad white brow band. Long epaulettes, white, broad pubic patch. Distal 25% of tail grizzled.

RANGE OF SPECIMENS: Southern Tanzania. Rahm (1970) noted the distribution as north of Lake Malawi, and Rungwe, Poroto, Livingstonstone, and Uzungwa Mountains, Tanzania.

SPECIMENS: Appendix 1, no. 5.

Colobus guereza Rüppell, 1835

TAXONOMIC NOTES: Nine subspecies were recognized by Schwarz (1929) and Rahm (1970). Dandelot (1971) recognized only six, synonymizing *percivali* with *guereza* and *uellensis* and *dodingae* with *occidentalis*. Hull's study (1979) of craniometric characters led him to recognize eight subspecies, uniting *uellensis* with *occidentalis*. Groves (2001) and Napier (1985) concurred with this arrangement, and that classification is followed here.

PELAGE NOTES: The distinguishing features of the pelage of *C. guereza* are the long white mantle and the long flowing tail, which ends in a white tuft. This species is also noted for its wide white ring around the callosities. The features used by Dandelot (1971) and Napier (1985) to distinguish between subspecies are the length of the mantle, color of tail base, and description of the white tail tuft.

RANGE OF SPECIMENS: The *Colobus guereza* specimens in the AMNH were collected from localities in Congo (Brazzaville), northeastern DRC, Uganda, Kenya, and Ethiopia. Napier (1985) and Dandelot (1971) recorded the range of the species from eastern Nigeria through Cameroon, northern Gabon, Congo (Brazzaville), eastwards through northern DRC, Central African Republic, southern Sudan and Ethiopia, and southwards to Kenya, Uganda, and northern Tanzania.

Colobus guereza gallarum Neumann, 1902

PELAGE NOTES: Long mantle, covering tail base which is black, grizzled underneath. White tuft is almost half of the total tail length.

RANGE OF SPECIMENS: Eastern Ethiopia. Ethiopia, northeast of Rift Valley, Galla country (Dandelot, 1971).

NOTE: The colobus monkeys collected by T. D. Carter at Mount Ansha include what appear to be specimens of both *C. g. gallarum* and *C. g. guereza*. Napier (1985) and Dandelot (1971) distinguished the two subspecies by the color of their tail base. Although the tail base of the specimens of *C. g. gallarum* is somewhat grizzled underneath, it is distinguishable from the specimens of *C. g. guereza*. Yalden et al. (1977) expressed dissatisfaction with the basis of the separation, stating that the variation in tail color may be clinal in nature. Furthermore, it is not clear if the distribution or range of the two subspecies overlaps. Rahm (1970) included a map of the distribution of all the subspecies of *Colobus*. In this map, the distribution of *C. g. gallarum* does not extend as far south or west as Dandelot (1971) suggested. Yalden et al. (1977) stated that there appears to be no geographic boundaries between the two forms to separate them or to prevent dispersal.

Furthermore, the location of Mt. Ansha could not be determined exactly. It is north of Mt. Cacca (Kaka), and the province Carter (collector) called Arussi is now called Arsi (Yalden, personal commun.) While it is acknowledged that the same locality is noted for two subspecies, they were separated in the collection according to pelage differences.

SPECIMENS: Appendix 1, no. 6.

Colobus guereza guereza Rüppell, 1835

TAXONOMIC NOTES: Dandelot (1971) united *percivali* with *guereza*, while other authors (Rahm, 1970; Hull, 1979; Napier, 1985; Groves, 2001) maintained the two as separate subspecies.

PELAGE NOTES: Long mantle, covering base of tail, which is grizzled. White tuft comprises half of the tail.

RANGE OF SPECIMENS: Western Ethiopia. Groves (2001) reported the range from forested areas of the Ethiopian highlands, extending into lowland forests along the Omo River and in the Blue Nile gorge.

SPECIMENS: Appendix 1, no. 7.

Colobus guereza kikuyuensis
Lönnberg, 1912

PELAGE NOTES: Very long mantle, covering up to a quarter of the tail. Base of tail black, white tuft voluminous, forming about two-thirds of the length of the tail.

RANGE OF SPECIMENS: Southwestern Kenya. The subspecies occurs at Ngong Escarpment, Mount Kenya, and the Aberdare Range (Dandelot, 1971; Groves, 2001).

SPECIMENS: Appendix 1, no. 8.

Colobus guereza matschiei
Neumann, 1899

PELAGE NOTES: Long mantle, covering base of tail. Tail base black, tail tuft full, comprising about one-third of total length.

RANGE OF SPECIMENS: Eastern Uganda and western Kenya. Dandelot (1971) noted the range of the subspecies as Kenya, west of Rift Valley, Mau Escarpment, and Mount Elgon.

SPECIMENS: Appendix 1, no. 9.

Colobus guereza occidentalis
(Rochebrune, 1886–1887)

TAXONOMIC NOTES: Rahm (1970) maintained *occidentalis* and *uellensis* as separate subspecies, while Dandelot (1971), Napier (1985), and Groves (2001) treated *uellensis* as a synonym of *occidentalis*. Hull's cranio-metric studies (1979) confirmed the view that the two are synonymous.

PELAGE NOTES: Short mantle, not extending beyond base of tail, which is black. There is variation among the specimens in the length of the tail tuft—from one-fifth to one-third of the total length.

RANGE OF SPECIMENS: There are three main collection localities for the specimens of *occidentalis* here: southern and western Uganda, northeastern DRC, and western Congo (Brazzaville). The subspecies is found across Africa from eastern Nigeria, southern Cameroon, Gabon, and northern DRC to Uganda and southwestern Sudan (Napier, 1985; Groves, 2001).

SPECIMENS: Appendix 1, no. 10.

Colobus polykomos (Zimmermann, 1780)

TAXONOMIC NOTES: Until recently, most authors (Rahm, 1970; Dandelot, 1971; Na-

pier, 1985) recognized three subspecies (*polykomos*, *dollmani*, and *vellerosus*). Dandelot (1971), however, noted that *vellerosus* might actually be a distinct species. More recently, Oates and Trocco (1983) suggested raising *C. polykomos vellerosus* to specific status based on vocalization and other analyses. Oates et al. (1994) followed Oates and Trocco (1983) in recognizing *vellerosus* as a separate species. Booth (1958) and Rahm (1970) suggested that the intermediate form, *dollmani*, might in fact be a hybrid swarm, a theory investigated by Groves et al. (1993). They conclude that *dollmani* is in fact a hybrid and that *polykomos* and *vellerosus* should be recognized as distinct species. In this catalog, I follow Groves et al. (1993) and Groves (2001) in recognizing *vellerosus* and *polykomos* as separate species. There are no specimens labeled *C. p. dollmani* in the AMNH collection.

PELAGE NOTES: Gray brow band, gray long epaulettes. Tail white from base to tip and untufted. Callosities bordered by narrow ring of white hair.

RANGE OF SPECIMENS: Liberia and southern Ivory Coast. The range of the species is from Guinea to Sassandra River, Ivory Coast (Napier, 1985; Groves, 2001). Rahm (1970) included Gambia in the range. However, Oates and Trocco (1983) suggested that it is unlikely that *C. polykomos* is present in Gambia. Schwarz (1929) stated that the type of *C. leucomeros* was almost certainly not from "River Gambia". Oates and Trocco (1983) were unaware of other specimens collected in Gambia and therefore excluded Gambia from the range of *C. polykomos*.

SPECIMENS: Appendix 1, no. 11.

Colobus satanas Waterhouse, 1838

TAXONOMIC NOTES: Dandelot (1971) and Eisentraut (1973) agreed that the subspecies *metternichi* was in fact based on partial albinos. Eisentraut (1973) also suggested that the mainland population may be subspecifically distinct from the island population on Bioko.

PELAGE NOTES: Coat entirely black.

RANGE OF SPECIMENS: The specimens in this collection were taken from southwestern Cameroon and northwestern Gabon. The

subspecies occurs in Bioko, southwestern Cameroon, Equatorial Guinea, Gabon, and northwestern Congo (Brazzaville) (Rahm, 1970; Carpaneto 1995).

SPECIMENS: Appendix 1, no. 12.

Colobus vellerosus (I. Geoffroy, 1834)

TAXONOMIC NOTES: As already noted, this species was previously considered a subspecies of *C. polykomos*, due, according to Dandelot (1971), "to a craze for simplification".

PELAGE NOTES: The six skins in the AMNH collection are not complete and consist only of the trunk of the body up to the forearms and down to the thighs. The grizzled patches on the thighs, the distinguishing feature of this species, are visible on the skins.

RANGE OF SPECIMENS: There were no locality data for the specimens of *vellerosus* in this collection. The range of the subspecies is from Bandama River, Ivory Coast, to western Nigeria (Dandelot, 1971; Rahm, 1970; Groves, 2001).

SPECIMENS: Appendix 1, no. 13.

GENUS *PROCOLOBUS*, SUBGENUS
PILIOCOLOBUS ROCHEBRUNE,
1886–1887

TAXONOMIC NOTES: The subgenus *Piliocolobus* of the genus *Procolobus* represents the red colobus monkey.

PELAGE NOTES: The red colobus have been described as large, slender monkeys with long, untufted tails (Napier, 1985). There is no sexual dimorphism in the coat coloration. The pelages of infants and adults differ somewhat in hue but not as markedly as in the black-and-white colobus. The amount of red coloration in the pelages of these monkeys varies considerably among subspecies. Some of the subspecies (e.g., *P. b. tholloni*) are strikingly red in color. Others exhibit little red color; rather, their pelts are drab brown, as seen in *P. b. oustaleti*. Napier (1985) has published useful descriptions and pelage notes on this group.

RANGE OF SPECIMENS: The range of the red colobus monkeys in the AMNH collection is somewhat limited, as only 7 of the approximate 14 subspecies are represented. The

range extends from Liberia and Ivory Coast in the west, across DRC and Uganda, with a few specimens from Tana River, Kenya. Dandelot (1971) stated that the red colobus monkeys are to be found across the African continent from Senegal in the west to the island of Zanzibar in the east.

Procolobus (Piliocolobus) badius
(Kerr, 1792)

TAXONOMIC NOTES: This species may actually be comprised of as many as eight species (Dandelot, 1971).

PELAGE NOTES: All of the *P. badius* subspecies in this collection have a dark brown or black band across the brow extending to the ears. They are similar in body size and can be easily distinguished by their respective pelage colors which have variable amounts of black, brown, and red.

RANGE OF SPECIMENS: The seven subspecies of *P. badius* in this collection are representative of populations in north-central Liberia, western Ivory Coast, western DRC, northeastern DRC (the majority of the specimens was from this region), Uganda, and Tana River, Kenya. As noted for the subgenus *Piliocolobus*, the actual range of these monkeys extends across the African continent.

Procolobus (Piliocolobus) badius badius
(Kerr, 1792)

PELAGE NOTES: Two rich colors are seen in this subspecies—black and maroon. Neither color lessens in intensity throughout the coat, as is often seen in the varying shades of brown observed in the pelages of other subspecies. Black head, maroon cheeks. Nape black with maroon shoulders. Back and rump black. Sides maroon. Upper arms black, lower arms and hands maroon. Thighs black, legs and feet maroon. Tail black from base to tip.

RANGE OF SPECIMENS: Liberia to Ivory Coast. The range of the subspecies is from Sierra Leone, eastern Guinea, to western Ivory Coast. Eastern limit of their range is thought to be the Bandama River (Dandelot, 1971; Groves, 2001).

SPECIMENS: Appendix 1, no. 14.

Procolobus (Piliocolobus) badius bouvieri
(Rochebrune, 1886–1887)

TAXONOMIC NOTES: This subspecies was considered by Dandelot (1971), Delson et al. (1982), and Groves (2001) to be a subspecies of *pennantii*.

PELAGE NOTES: The skin specimen in the collection is not in good condition. The head, feet, and hands are missing. The shoulders are cream-colored, the midline of the back is dark red to brown. The rest of the pelage is bright red to orange.

RANGE OF SPECIMENS: The collectors of this specimen noted the location as Ouessou, Congo; the skin is more than likely a trade skin, so the exact locality cannot be determined. The distribution of the subspecies is northern Congo (Brazzaville). Rahm (1970) noted the distribution as including the Rivers Sangha and Likouala. Dandelot (1971) stated that the distribution may also include the confluence of the Congo and Oubangui Rivers.

SPECIMENS: Appendix 1, no. 15.

Procolobus (Piliocolobus) badius ellioti
(Dollman, 1909)

TAXONOMIC NOTES: Three specimens collected by Lang and Chapin were classed as a new species, *Colobus langi* by Allen (1925). This name was later considered a synonym of *ellioti*. However, as mentioned previously, it is now thought that the species *ellioti* may actually be comprised of a number of distinct species and hybrids (Colyn, 1991). In fact, a comparison of Allen's *langi* specimens to the one considered by him to be *C. ellioti* (52286) may support this proposition. All five specimens in the collection are from the northeast of DRC. The collection localities on the Lang and Chapin map appear to be separated by rivers, although it is difficult to conclude from the map if real geographic boundaries exist. For the purposes of this catalog, all of the specimens are tentatively included in *P. b. ellioti*. Two distinct phenotypes can be seen in the collection. The two morphological characters used by Allen (1925) to distinguish the *C. ellioti* and *C. langi* specimens were body size (*C. langi* being smaller) and the abrupt transition in color observed on the back of *C. langi*.

That transition can be seen in specimens 52290, 52291, 52292, and 119607. However, the latter is larger in body size than the first three specimens. The abrupt color transition is not evident in specimen 52286. It remains to be seen how the taxonomy of this group will be resolved.

Dandelot (1971) considered *ellioti* to be a potential species, while Delson et al. (1982) considered it a subspecies of *pennantii*. Groves (2001) included *ellioti* as a subspecies of *foai*.

PELAGE NOTES: Group 1: Specimen 52286. Auburn head and cheeks. Nape speckled lightly with black. Shoulders light auburn. Upper back deep auburn-brown, grading to brown at sides of mid-back and rump. No abrupt transition in back coloration. Sides brown, underparts cream. Forelimbs auburn, hands reddish-brown. Hind limbs light brown from thigh to foot, feet darker brown. Tail brown. Group 2: Specimen 119607. Auburn head and cheeks. Nape, shoulders, top of back rich auburn. Abrupt transition to dark brown at mid-back, grading into lighter brown at rump. Forelimbs and hands auburn. Hind limbs brown from thighs to feet, feet darker brown. Tail dark brown to tip. Specimens 52290, 52291, and 52292 are similar in coloration but are considerably smaller in size than specimen 119607. The major difference in coloration between these two groups is the transition between auburn and brown on the back. It is an obvious and distinguishing feature of the latter group.

RANGE OF SPECIMENS: All specimens of *P. b. ellioti* in this collection were collected from northeastern DRC. *Procolobus b. ellioti* is found in eastern DRC, the Ituri forest, and at least as far south as Lake Edward (Dandelot, 1971).

SPECIMENS: Appendix 1, no. 16.

Procolobus (Piliocolobus) badius oustaleti
(Trouessart, 1906)

TAXONOMIC NOTES: Lang and Chapin collected all but one of these specimens. In his notes on this collection, Allen (1925) divided the specimens into two subspecies—*Colobus powelli powelli* and *Colobus powelli brunneus*. The main reason behind this separation was the variation in color. The specimens

from the forest galleries of the savannah country were considered much paler and duller in tone (*C. p. brunneus*) than the more richly colored specimens from the rainforests (*C. p. powelli*). The author did however remark on the "extremely wide range of color variation" within the entire group. Almost every description of pelage in terms of sex, age, and locality has to be qualified by numerous exceptions. Both names (*powelli* and *brunneus*) were later considered synonyms of *oustaleti*. This subspecies itself is also considered to be a subspecies of *rufomitrat* (Dandelot, 1971), *pennantii* (Delson et al., 1982), or *foai* (Groves, 2001).

PELAGE NOTES: Considerable variation in pelage color is seen in the skins of this group. The amount of red in the pelage varies from its complete absence to auburn-infused brown. The following description is general. Head usually dark brown, lighter brown cheeks. Nape of neck dark brown, shoulders brown. Back coloration grades from dark brown to lighter at rump. Sides medium brown to reddish brown. Underparts light colored. Forelimbs brown, tinged with red, cream underneath. Hands and feet dark brown or black. Hind limbs medium brown to reddish brown. Tail dark brown. The overall impression of coat color in this group is one of nondescript, dull brown tones. The near absence of red coloration distinguishes the group from other subspecies. There is little evidence of color transition or of the rich hues seen in the other subspecies in this collection. There are three specimens of infant skins in the *P. b. oustaleti* collection. Two of the specimens (52274 and 52328) have no red coloration and are duller in tone than the adult skins. The third infant pelage (52318) has some red coloration appearing on the head.

RANGE OF SPECIMENS: Most of the specimens collected are from northeast DRC, in the vicinity of Faradje. The range of this subspecies extends from eastern Congo (Brazzaville) across DRC and as far east as Lake Albert and the Ituri River (Dandelot, 1971).

SPECIMENS: Appendix 1, no. 17.

Procolobus (Piliocolobus) badius rufomitrat (Peters, 1879)

TAXONOMIC NOTES: Many authors have considered *rufomitrat* a valid species, in-

cluding Dandelot (1971), Delson et al. (1982), and Groves (1993, 2001).

PELAGE NOTES: Head capped with russet, light brown cheeks. Nape dark brown, shoulders light brown to creamy white. Back grades from dark to medium to light brown at rump. Sides light brown grading to creamy-white underparts. Forelimbs and hind limbs very light brown, almost creamy. Hands and feet light brown. Tail medium brown, darker at tip. The distinguishing characteristic here is the prominent red cap. The rest of the coat is brown, similar in tone to the brown of *P. b. oustaleti*.

RANGE OF SPECIMENS: Specimens were collected from the mouth of the Tana River, Kenya. Range of the subspecies is restricted to Tana River gallery forests from Garsen north nearly to Wenje (Groves, 2001).

SPECIMENS: Appendix 1, no. 18.

Procolobus (Piliocolobus) badius tephrosceles (Elliot, 1907)

TAXONOMIC NOTES: Dandelot (1971) considered *tephrosceles* to be a subspecies of *rufomitrat*, while Delson et al. (1982) included it as a subspecies of *pennantii*. Groves (2001) considered it a good species.

PELAGE NOTES: There are no skins in the collection to represent these specimens.

RANGE OF SPECIMENS: All the specimens are from the Kibale Forest, western Uganda. The range of the subspecies extends from western Uganda, Rwanda, Burundi, and northwestern Tanzania (Dandelot, 1971; Groves, 2001).

SPECIMENS: Appendix 1, no. 19.

Procolobus (Piliocolobus) badius tholloni (Milne-Edwards, 1886)

TAXONOMIC NOTES: Dandelot (1971) considered *tholloni* to be a valid species, while it was considered to be a subspecies of *pennantii* by Delson et al. (1982). Groves (2001) regarded it as a good species.

PELAGE NOTES: Rich auburn head, cheeks a lighter auburn. Nape red, speckled with black. Shoulders orange-red. Top half of back black to dark brown. Rest of back and sides rich auburn. All limbs rich auburn to wrists and ankles. Wrists, ankles, hands, and feet all black. Underparts creamy, infused

with auburn. Tail deep auburn grading to red-brown at tip.

This subspecies is distinctly red in color. The red tail and the abrupt transition of red to black at the wrists and ankles are distinguishing features in the specimens in the AMNH collection. No other group in the collection has as much red in its pelage.

RANGE OF SPECIMENS: Western DRC, just south of the River Congo, on the border with Congo. Dandelot (1971) noted that this subspecies is found south of the Congo River; the southern limit may be the Rivers Kasai and Sankuru. Groves (2001) recorded the eastern limit as the River Lomami.

SPECIMENS: Appendix 1, no. 20.

GENUS *PROCOLOBUS*, SUBGENUS
PROCOLOBUS ROCHEBRUNE,
1886–1887

Procolobus (Procolobus) verus
(van Beneden, 1838)

TAXONOMIC NOTES: The subgenus *Procolobus* contains only one species, *Procolobus verus*, the olive colobus.

PELAGE NOTES: Coat has short hair and is a dull reddish olive color. Limbs and tail are olive. There is a longitudinal crest on the crown.

RANGE OF SPECIMENS: Liberia. The range extends from Sierra Leone to eastern Nigeria (Dandelot, 1971; Oates et al., 1994).

SPECIMENS: Appendix 1, no. 21.

GAZETTEER

The exact location and geographic coordinates of as many localities as possible were determined. Information on localities was taken from a number of sources: *The Times Atlas of the World* (9th edition), collectors' field notes, maps and gazetteers in the Department of Mammalogy archives, and publications of other authors (e.g., Allen, 1925; Colyn, 1991).

Specimens were collected from three broad geographic regions in Africa. They are listed under those regions below. When available, the geographic coordinates are noted for the collection locality. A map of the localities in the Congo Basin is represented in figure 1.

WEST AFRICAN FOREST BLOCK

Gabon

- Kango, 00°15'N, 10°11'E (Times Atlas, 1992).

Ghana

- Manso Wassaw. It is likely that the collection locality is between two towns, Manso and Wassaw. Manso is at 05°08'N, 01°50'W (Times Atlas, 1992). There is a town called Wassaw Dunwa at 05°46'N, 02°32'W (US Board on Geographic Names No. 102, 1967).

Ivory Coast

- Cavally River, Georgetown, 04°36'N, 07°33'W (US Board on Geographic Names No. 89, 1965).
- Cavally River, Niroyé. A map for the locations of Georgetown and Niroyé can be found in Tate (1942). Niroyé is found in the region of the Lower Cavally River, south of Taté, 04°48'N, 7°32'W (Times Atlas, 1992).
- Duékoué, 06°40'N, 07°15'W (Times Atlas, 1992).

Liberia

- Lofa, 11 km north, 3 km east of Ziggida, Gabayea River. Dickerman's field notes contain a map. Ziggida is at 08°02'N, 09°29'W (US Board on Geographic Names No. 106, 1968).
- Newtown, 04°54'N, 08°26'W (US Board on Geographic Names No. 106, 1968).
- Sawtown, 11 mi east of the Farmington River (letter from Tate to H.E. Anthony, correspondence file, AMNH). The Farmington River is located at 06°08'N, 10°22'W (US Board on Geographic Names No. 106, 1968).

CONGO BASIN

Cameroon

- Efulan, 02°42'N, 10°30'E (Chapin, 1954), 53 miles east of Kribi at 02°56'N, 09°56'E (Times Atlas, 1992).
- 15 km west of Eséka, 03°40'N, 10°48'E (Times Atlas, 1992).
- Mfume = Mfuni, 05°40'N, 09°16'E (US Board on Geographic Names No. 60, 1962).

Congo (Brazzaville)

- Kelle Abole. Again, it is likely that the collection locality is between two towns, Kelle and Abole. A town called Kellé is located at 00°05'S, 14°33'E (Times Atlas, 1992). There is a town called Abolo at 00°08'N, 14°16'E

(US Board on Geographic Names No. 61, 1962)

- Makoua, 00°01'S, 15°40'E (Times Atlas, 1992).
- Ouesso, 01°38'N, 16°03'E (Times Atlas, 1992).

Democratic Republic of the Congo

- Abawe, 02°30'N, 26°50'E (Allen, 1925).
- Akenge, 02°54'N, 26°49'E (Chapin, 1954).
- Angumu, 00°10'S, 27°42'E (Colyn, 1991).
- Avakubi, 01°18'N, 27°35'E (Colyn, 1991).
- Bafuka, 04°20'N, 27°50'E (Allen, 1925).
- Bafwabaka, 02°10'N, 27°39'E (Colyn, 1991).
- Beni, 3,900 ft., 00°28'N, 29°28'E (Chapin, 1954).
- Bolobo, 02°10'S, 16°17'E (Times Atlas, 1992).
- Faradje, 03°44'N, 29°43'E (Colyn, 1991).
- Gamangui, 02°10'N, 27°17'E (Colyn, 1991).
- Kasai District, Kananga (formerly Luluabourg), 05°53'S, 22°26'E (Times Atlas, 1992).
- Kivu, west base of Ruwenzori. This information probably refers to the district of Kivu. The Ruwenzori Mountains run from 00°05'N, 29°42'E to 00°53'N, 30°12'E (Chapin, 1954).
- Lukolela, 01°10'S, 17°11'E (Times Atlas, 1992).
- Lukolela, Plaine de Tervueren (the latter not found).
- Medje, 02°25'N, 27°18'E (Colyn, 1991).
- Mokoko (location from Chapin's field notes), "near Mokoko, 114 km from Irumu [01°31'N, 29°49'E (Chapin, 1954)] on road to Beni", 00°28'N, 29°28'E (Chapin, 1954).
- Niapu, 02°25'N, 26°28'E (Colyn, 1991).
- Poko, 03°08'N, 26°58'E (Colyn, 1991).
- Risimu, 00°31'N, 25°35'E (Chapin, 1954).
- Rutshuru, 01°11'S, 29°27'E (Colyn, 1991).
- Ukaturaka, 02°00'N, 20°30'E (Allen, 1925).
- Vankerckhovenville, 03°17'N, 29°26'E (Chapin, 1954).
- Yakuluku, 04°21'N, 28°49'E (Chapin, 1954).

Uganda

- Kakuka area, NW Ruwenzori Mts., 9000 ft. This is probably Kakuka Mt., 00°35'N, 29°59'E (Colyn, 1991).
- Karamoja Dist., Mt. Kadam, 01°45'N, 34°43'E (Times Atlas, 1992).
- Karamoja Dist., Namalu, foot of Mt. Kadam. Namalu is at 01°49'N, 34°38'E (Delany, 1975).
- Kibale Forest, Kanyawara, 5,000 ft, 00°34'N, 30°21'E (from collector's field tags).

- Kibale Forest, near Dubona camp, 00°14'N, 30°22'E (from collector's field tags).
- Malabigambo Forest, 00°57'S, 31°35'E (Colyn, 1991), Sango Bay area, 4,000 ft.
- Mubende area, 4,000 ft. Mubende is at 00°35'N, 31°24'E (Times Atlas, 1992).
- West Nile Dist., Aringa Co., junction of Koich and Kenga Rivers. A town called Koich is located at 02°35'N, 32°14'E (Times Atlas, 1992) and Koich stream is at 03°28'N, 31°00'E to 03°23'N, 31°30'E (Pohill, 1988). Kenga River could not be located.
- West Nile Dist., Koboko Co., 03°24'N, 30°58'E (Times Atlas, 1992), Godea—not located.
- West Nile Dist., Koboko Co., 03°24'N, 30°58'E (Times Atlas, 1992), Ludara—not located.
- West Nile Dist., Koboko Co., 03°24'N, 30°58'E (Times Atlas, 1992), Utukiliri—not located.

RIFT VALLEY SYSTEM

Ethiopia

- Arussi, Mt. Ansha. The district of Arussi is now called Arsi. Mount Ansha is located north of Mount Cacca (Kaka), 07°45'N, 39°15'E (Yalden et al., 1980), Arussi Mountains, 07°30'N, 39°20'E (Yalden et al., 1977). Kaka Mountains are marked on Carter's expedition map (no. 4520, AMNH map file); however, Mount Ansha is not.
- Lake Stephanie, 04°26'N, 36°56'E to 05°00'N, 36°45'E (Chapin, 1954).

Kenya

- Aberdare Range, 00°07'S, 36°33'E to 00°58'S, 36°39'E (Chapin, 1954).
- Elgeyo Forest, 7,000 ft, 00°18'N, 35°33'E to 01°20'N, 35°38'E (Pohill, 1988).
- Kijabe, 00°56'S, 36°34'E (Times Atlas, 1992).
- Kikuyu. The village of Kikuyu is at 01°14'S, 36°40'E (Chapin, 1954).
- Kikuyu Escarpment, 00°56'S, 36°35'E to 01°06'S, 36°35'E (Chapin, 1954), Theita (Thika) River, 00°44'S, 36°47'E to 00°54'S, 37°28'E (Chapin, 1954).
- Nyeri Dist., South Laikipia Forest, 1 mi north of Bellevue, 7,900 ft. The coordinates for Bellevue are given in Pine's field notes as 00°12'S, 36°43'E.
- Tana River, 00°42'S, 37°14'E to 02°33'S, 40°31'E (Chapin, 1954).
- Uasin—Gishu District, 00°10'N, 34°50'E to 00°56'N, 35°32'E (Chapin, 1954).

Tanzania

- Rungwe, 5,650 ft, 09°10'S, 33°35'E (Times Atlas, 1992).

ACKNOWLEDGMENTS

I thank Darrin Lunde and Esteban Sarmiento for advise on this work throughout the process. I am grateful to John Oates and Christopher Norris for helpful suggestions and criticism of an early draft of the manuscript. Eric Stiner provided essential assistance with the map and my brother, Kevin O'Leary checked locality coordinates for the gazetteer. Finally, I thank Rob Voss and two anonymous reviewers for their valuable comments.

REFERENCES

- Allen, J.A. 1925. Primates collected by the American Museum Congo Expedition. *Bulletin of the American Museum of Natural History* 47: 283–499.
- Booth, A.H. 1958. The zoogeography of West African primates: a review. *Bulletin de l'Institut français d'Afrique noire* 20A: 587–622.
- Brandon-Jones, D. 1984. *Colobus* and leaf monkeys. In I.D. MacDonald (editor), *Encyclopedia of mammals*, 398–408. London: George Allen and Unwin.
- Buettner-Janusch, J., and I. Tattersall. 1985. An annotated catalogue of Malagasy primates (families Lemuridae, Indriidae, Daubentonidae, Megaladapidae, Cheirogaleidae) in the collections of the American Museum of Natural History. *American Museum Novitates* 2834: 1–45.
- Carpaneto, G.M. 1995. Occurrence of black colobus *Colobus satanas* in northwestern Congo. *African Primates* 1(2): 42–44.
- Chapin, J.P. 1954. Gazetteer for "The birds of the Belgian Congo". *Bulletin of the American Museum of Natural History* 75B: 638–738.
- Clutton-Brock, T.H. 1974. Primate social organisation and ecology. *Nature* 250: 539–542.
- Colyn, M. 1991. L'importance zoogéographique du bassin du fleuve Zaïre pour la spéciation: le cas des primates simiens. *Musée Royal de l'Afrique Central Tervuren, Belgique Annales Sciences Zoologiques* 264: 1–250.
- Dandelot, P. 1971. Order Primates, suborder Anthropoidea. In J. Meester and H.W. Setzer (editors), *The mammals of Africa: an identification manual*, 1–43. Washington, DC: Smithsonian Institution.
- Delany, M.J. 1975. The rodents of Uganda. London: Trustees of the British Museum (Natural History).
- Delson, E., C.P. Groves, P. Grubb, C.A. Miu, and S. Wan. 1982. Family Cercopithecidae. In J.H. Honacki, K.E. Kinman, and J.W. Koepl (editors), *Mammal species of the world*: 230–242. Lawrence, KS: Association of Systematics Collections.
- Eisenbraut, M. 1973. Die Wirbeltierfauna von Fernando Poo und Westkamerun. *Bonner zoologische Monographien* 3: 1–428, 5 pls.
- Groves, C.P. 1993. Order Primates. In D.E. Wilson and D.M. Reeder (editors), *Mammal species of the world: a taxonomic and geographic reference*, 2nd ed.: 243–277. Washington, DC: Smithsonian Institution Press.
- Groves, C.P. 2001. *Primate taxonomy*. Washington, DC: Smithsonian Institution Press.
- Groves, C.P., R. Angst, and C. Westwood. 1993. The status of *Colobus polykomos dollmani* Schwarz. *International Journal of Primatology* 14(4): 573–586.
- Hill, W.C. Osman. 1952. The external and visceral anatomy of the olive colobus monkey. *Proceedings of the Zoological Society of London* 122: 127–186.
- Hill, W.C. Osman, and A.H. Booth. 1957. Voice and larynx in African and Asian Colobidae. *Journal of the Bombay Natural History Society* 54: 309–321.
- Hull, D.B. 1979. A craniometric study of the black and white *Colobus* Illiger, 1811 (Primates: Cercopithecoidea). *American Journal of Physical Anthropology* 51: 163–181.
- Kuhn, H.-J. 1967. Zur Systematik der Cercopithecidae. In D. Stark, R. Schneider, and H.-J. Kuhn (editors), *Neue Ergebnisse der Primatologie*: 25–46. Stuttgart: Gustav Fischer.
- Kuhn, H.-J. 1972. On the perineal organ of male *Procolobus*. *Journal of Human Evolution* 1: 371–378, 4 pls.
- Lawrence, M. 1993. Catalog of recent mammal types in the American Museum of Natural History. *Bulletin of the American Museum of Natural History* 217: 59.
- Martin, W.C.L. 1841. A natural history of quadrupeds and other mammiferous animals comprising a description of the class Mammalia including the principal varieties of the human race. London: Whitehead.
- Napier, P.H. 1985. Catalogue of Primates in the British Museum (Natural History) and elsewhere in the British Isles. Part III: Family Cercopithecidae, subfamily Colobinae. London: British Museum (Natural History).
- Oates, J.F., A. Glynn Davies, and E. Delson. 1994. The diversity of living colobines. In A. Glynn Davies and J.F. Oates (editors), *Colobine mon-*

- keys: their ecology, behavior and evolution: Cambridge: Cambridge University Press. 45–73.
- Oates, J.F., and T.F. Trocco. 1983. Taxonomy and phylogeny of black-and-white colobus monkeys. *Folia Primatologica* 40: 83–113.
- Pocock, R.I. 1926. The external characters of catarrhine monkeys and apes. *Proceedings of the Zoological Society of London* 1926: 1479–1579.
- Pocock, R.I. 1936. The external characters of a female red colobus monkey (*Procolobus badius waldroni*). *Proceedings of the Zoological Society of London* 1935: 939–944.
- Pohill, D. 1988. Flora of tropical east Africa: index of collecting localities. London: Royal Botanic Gardens.
- Rahm, U. 1970. Ecology, zoogeography and systematics of some African forest monkeys. In J.R. Napier and P.H. Napier (editors), *Old World monkeys: ecology, systematics and behavior*. New York: Academic Press.
- Rochebrune, A.-T. de. 1886–87. Faune de la Sénégambie. Supplément Mammifères. Paris: Octave Doin.
- Schwarz, E. 1929. On the local races and distribution of the black and white colobus monkeys. *Proceedings of the Zoological Society of London*: 1929: 585–598.
- Strasser, E., and E. Delson. 1987. Cladistic analysis of cercopithecoid relationships. *Journal of Human Evolution* 16: 81–99.
- Struhsaker, T.T., and J.F. Oates. 1975. Comparison of the behavior and ecology of red colobus and black and white colobus monkeys in Uganda: a summary. In R.H. Tuttle (editor), *Socioecology and psychology of primates*: 103–123. The Hague: Mouton.
- Tate, G.H.H. 1942. The lower Cavally River, West Africa. *The Geographical Review* 32: 574–584.
- The Times Atlas of the World. 1992. Ninth comprehensive edition. London: Times Books and Random House.
- United States Board on Geographic Names. 1962. Gazetteer no. 60, Cameroon. Washington, DC: Office of Geography, Department of the Interior.
- United States Board on Geographic Names. 1962. Gazetteer no. 61, Republic of Congo (Brazzaville). Washington, DC: Office of Geography, Department of the Interior.
- United States Board on Geographic Names. 1965. Ivory Coast. Official standard names gazetteer no. 89. Washington, DC: Office of Geography, Department of the Interior.
- United States Board on Geographic Names. 1967. Ghana. Official standard names gazetteer no. 102. Washington, DC: Office of Geography, Department of the Interior.
- United States Board on Geographic Names. 1968. Liberia. Official standard names gazetteer no. 106. Washington, DC: Office of Geography, Department of the Interior.
- Verheyen, W.N. 1962. Contribution à la craniologie comparée des Primates: les genres Colobus Illiger 1811 et Cercopithecus Linne 1758. *Musee Royal de l'Afrique Central Tervuren, Belgique Annales Sciences Zoologiques* 105: 1–255.
- Yalden, D.W., M.J. Largen, and D. Kock. 1977. Catalogue of the mammals of Ethiopia. Part 3: Primates. *Monitore zoologico Italiano* 1: 1–52.
- Yalden, D.W., M.J. Largen, and D. Kock. 1980. Catalogue of the mammals of Ethiopia. Part 4: Carnivora. *Monitore zoologico Italiano* 8: 169–272.

APPENDIX 1

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL / T / HF / E
<u>1. <i>Colobus angolensis adolfifriederici</i></u>							
146576	No data	M	Ad	Skin	Uganda, Malabigambo Forest, Sango Bay area, 4000 ft	A.J. Hadow UP141	No data
<u>2. <i>Colobus angolensis angolensis</i></u>							
86704	7 Sept 1930	M	Ad	Skin, skull	DRC, Equateur, Lukolela	F. Edson III	1500/ 900/ 188.5/ 33
55012	No data	—	Juv	Skin	DRC, Kasai occidental, Kananga	R. Callewaert	No data
55014	17 Sept 1924	M	Ad	Skin, skull, leg bones	DRC, Kasai occidental, Kananga	R. Callewaert 1	No data
55032	No data	—	Juv	Skull	DRC, Kasai occidental, Kananga	R. Callewaert	No data
55056	No data	—	—	Skin	DRC, Kasai occidental, Kananga	R. Callewaert 18	No data
55069	No data	—	Juv	Skull	DRC, Kasai occidental, Kananga	R. Callewaert 3	No data
55100A	No data	F	Juv	Skull	DRC, Kasai occidental, Kananga	R. Callewaert 57	No data
86358	No data	—	Inf	Skull	DRC, Kasai occidental, Kananga	R. Callewaert	No data
<u>3. <i>Colobus angolensis cottoni</i></u>							
52140	29 Sept 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1496	1200/ 745/ 165/ 43
52141	29 Sept 1913	M	Inf	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1507	620/ 375/ 100/ 34
52142	30 Sept 1913	F	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Akenge	Lang & Chapin 1531	1390/ 815/ 182/ 38
52443	1 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1543	1400/ 867/ 177/ 41
52144	1 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1547	1390/ 795/ 192/ 44
52145	2 Oct 1913	M	Inf	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1556	665/ 410/ 103/ 33
52146	2 Oct 1913	F	[Ad]	Skin	DRC, Haut-Congo, Akenge	Lang & Chapin 1566	1280/ 732/ 184/ 43
52147	2 Oct 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1569	1000/ 600/ 147/ 40
52148	3 Oct 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1587	1110/ 670/ 154/ 41
52149	4 Oct 1913	M	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Akenge	Lang & Chapin 1596	1440/ 880/ 195/ 41
52150	5 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1600	1367/ 805/ 190/ 45
52151	5 Oct 1913	M	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Akenge	Lang & Chapin 1607	1450/ 825/ 188/ 40
52152	5 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1608	1375/ 847/ 193/ 43
52153	7 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1626	1360/ 790/ 185/ 41
52154	9 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1651	No data
52155	9 Oct 1913	F	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1656	No data
52156	11 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1676	1410/ 845/ 200/ 46
52157	11 Oct 1913	F	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1680	1250/ 750/ 156/ 39
52158	16 Oct 1913	M	Ad	Skull	DRC, Haut-Congo, Akenge	Lang & Chapin 01727	No data
52159	18 Oct 1913	F	Juv	Skin	DRC, Haut-Congo, Akenge	Lang & Chapin 1762	610/ 375/ 95/ 34
52160	21 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1794	1350/ 780/ 187/ 47
52161	23 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1824	1450/ 875/ 190/ 46
52162	28 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1834	1447/ 875/ 192/ 42
52163	14 April 1914	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2498	1450/ 810/ 205/ 46
52164	14 April 1914	M	[Ad]	Skin	DRC, Haut-Congo, Avakubi	Lang & Chapin 2499	1340/ 720/ 190/ 40
52165	15 April 1914	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2500	1340/ 720/ 190/ 40
52166	31 Jan 1910	M	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 117	1460/ 875/ 185/—
52167	1 Feb 1910	M	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 120	1355/ 765/ 195/—
52168	1 Feb 1910	M	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 121	1390/ 800/ 185/ 55
52169	5 Feb 1910	F	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 127	1385/ 780/ 185/—
52170	5 Feb 1910	M	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 128	1450/ 820/ 200/—
52171	12 Feb 1910	F	[Ad]	Skin	DRC, Haut-Congo, Gamangui	Lang & Chapin 160	1505/ 800/ 200/—
52172	12 Feb 1910	F	Juv	Skin, part skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 161	650/ 395/ 100/—
52173	15 Feb 1910	F	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 169	1470/ 880/ 185/—
52174	20 Feb 1910	M	Ad	Skull, skeleton	DRC, Haut-Congo, Gamangui	Lang & Chapin 185	No data
52175	14 April 1910	M	Inf	Skin, skull	DRC, Haut-Congo, Medje	Lang & Chapin 260	670/ 410/ 97/—
52177	12 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1881	1230/ 645/ 200/ 41

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<u>3. <i>Colobus angolensis cottoni</i> (continued)</u>							
52178	12 Nov 1913	F	Inf	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1882	490/ 285/ 79/ 31
52179	17 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1926	1470/ 890/ 200/ 46
52180	17 Nov 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1927	1225/ 765/ 170/ 40
52181	17 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1957	1425/ 840/ 187/ 45
52182	19 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1959	1375/ 835/ 171/ 41
52183	20 Nov 1913	F	Juv	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1979	1130/ 660/ 155/ 39
52184	21 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1991	1135/ 790/ 184/ 41
52185	22 Nov 1913	M	[Ad]	Skin	DRC, Haut-Congo, Niapu	Lang & Chapin 2015	1310/ 820/ 180/ 46
52186	22 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2022	2420/ 820/ 197/ 45
52187	23 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2034	2355/ 810/ 183/ 39
52188	25 Nov 1913	F	Juv	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2056	990/ 600/ 47/ 38
52189	26 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2087	1338/ 765/ 182/ 46
52190	26 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2088	1365/ 830/ 187/ 37
52191	28 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2104	1380/ 830/ 190/ 40
52192	28 Nov 1913	F	—	Alcoholic	DRC, Haut-Congo, Niapu	Lang & Chapin 02104	No data
52193	30 Nov 1913	M	Inf	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2124	750/ 470/ 115/ 36
52196	1 Dec 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2133	1390/ 810/ 191/ 45
52197	2 Dec 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2151	1280/ 760/ 177/ 39
52198	20 Jan 1914	F	Inf	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2419	740/ 465/ 109/ 33
52199	1 Aug 1913	F	Inf	Skin, skull	DRC, Haut-Congo, Poko	Lang & Chapin 1340	685/ 425/ 103/—
52200	1 Aug 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Poko	Lang & Chapin 1358	No data
52201	Aug 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Poko	Lang & Chapin 1359	No data
52202	Aug 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Poko	Lang & Chapin 1360	No data
52203	May–June 1909	—	—	Skin	DRC, Haut-Congo, Ukaturaka	Lang & Chapin 04	No data
52204	No data	—	—	Skin	DRC	Lang & Chapin	No data
52205	No data	—	—	Skin	DRC	Lang & Chapin	No data
<u>4. <i>Colobus angolensis ruwenzorii</i></u>							
146583	No data	F	Ad	Skin, skull	Uganda, Kakuka area, NW Ruwenzori Mts, 9000 ft	A.J. Hadow P255	No data
146584	No data	M	Juv	Skin, skull	Uganda, Kakuka area, NW Ruwenzori Mts, 9000 ft	A.J. Hadow P260	No data
<u>5. <i>Colobus angolensis sharpei</i></u>							
81307	25 May 1919	M	Ad	Skin, skull	Tanzania, Rungwe, 5650 ft	R.L. Boulton 10	1440/ 788/ 172/ 38
81308	29 May 1929	F	Ad	Skin, skull	Tanzania, Rungwe, 5650 ft	R.L. Boulton 17	1371/ 725/ 178/ 35
81309	3 June 1929	M	Ad	Skin, skull	Tanzania, Rungwe, 5650 ft	R.L. Boulton 30	1500/ 800/ 178/ 41
81310	29 May 1929	M	Ad	Skin, skull	Tanzania, Rungwe, 5650 ft	R.L. Boulton 16	1400/ 763/ 184/ 38
81311	27 May 1929	F	Ad	Skin, skull	Tanzania, Rungwe, 5650 ft	R.L. Boulton 14	1360/ 737/ 184/ 38
81312	25 May 1929	M	Ad	Skin, skull	Tanzania, Rungwe, 5650 ft	R.L. Boulton 11	1270/ 686/ 169/ 38
<u>6. <i>Colobus guereza gallarum</i></u>							
81068	8 March 1929	M	Juv	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 66	889/ 268/ 152/—
81069	8 March 1929	F	Ad	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 68	1097/ 601/ 158/—
81073	8 March 1929	F	Juv	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 69	874/ 438/ 150/—
81074	8 March 1929	M	Inf	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 70	640/ 358/ 109/—
81066	13 March 1929	F	Ad	Skin, skull	Ethiopia, Arsi, 30 mi S of Mt. Ansha	T.D. Carter 86	1100/ 590/ 170/—
81067	13 March 1929	M	Ad	Skin, skull	Ethiopia, Arsi, 30 mi S of Mt. Ansha	T.D. Carter 87	1182/ 560/ 181/—

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<u>7. <i>Colobus guereza guereza</i></u>							
54010	1920	—	—	Skin	Ethiopia	B. Brown	No data
81070	8 March 1929	M	Ad	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 64	1187/ 557/ 178/—
81071	8 March 1929	F	Ad	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 67	1053/ 470/ 171/—
80172	8 March 1929	M	Ad	Skin, skull	Ethiopia, Arsi, Mt. Ansha	T.D. Carter 65	1147/ 542/ 180/—
20811	4 March 1903	M	Ad	Skin, part skull	Ethiopia, Lake Stephanie	F. Whitehouse 3008	No data
20812	4 March 1903	M	Ad	Skin, skull	Ethiopia, Lake Stephanie	F. Whitehouse 3009	No data
<u>8. <i>Colobus guereza kikuyuensis</i></u>							
27711	12 Sept 1906	M	Ad	Skin, skull, skeleton	Kenya	Tjader & Lang 146	No data
36378	No data	—	Ad	Skin, skull	Kenya	P.J. Rainey 6	No data
36379	No data	—	Ad	Skin, skull	Kenya	P.J. Rainey 14	No data
36380	No data	—	Ad	Skin, skull	Kenya	P.J. Rainey 55	No data
36381	No data	—	Ad	Skin, skull	Kenya	P.J. Rainey 63	No data
36382	No data	—	Ad	Skin, skull	Kenya	P.J. Rainey 15	No data
36383	No data	—	Ad	Skin, skull	Kenya	P.J. Rainey 70	No data
88621	No data	—	—	Skin	Kenya	W. Rainsford 3589	No data
88622	No data	—	—	Skin	Kenya	W. Rainsford	No data
99468	2 Dec 1934	—	Ad	Skin, skull, skeleton	Kenya, Aberdare Range	W.D. Campbell	No data
99469	2 Dec 1934	—	Inf	Skin, skull, skeleton	Kenya, Aberdare Range	W.D. Campbell	No data
54256	5 March 1910	M	Ad	Skin, skull	Kenya, Escarpment	J.L. Clark 177	1194/ 584/ 197/— (47"/ 23"/ 7.75"/—)
27710	4 June 1906	M	Ad	Skin, skull	Kenya, Kijabe	Tjader & Lang 40	No data
27712	3 June 1906	F	Ad	Skin, skull	Kenya, Kijabe	Tjader & Lang 35	No data
27713	3 June 1906	F	Ad	Skin, skull	Kenya, Kijabe	Tjader & Lang 34	No data
27714	6 June 1906	M	Juv	Skin, skull	Kenya, Kijabe	Tjader & Lang 48	No data
27715	4 June 1906	F	Inf	Skin, part skull	Kenya, Kijabe	Tjader & Lang 37	No data
83407	July 1912	F	—	Skin	Kenya, Kikuyu	A. J. Klein	No data
33304	1 Oct 1911	M	Ad	Skin, skull	Kenya, Kikuyu Escarpment, Theita River	A. J. Klein	No data
33305	1 Oct 1911	F	Ad	Skin, skull	Kenya, Kikuyu Escarpment, Theita River	A. J. Klein	No data
33306	1 Oct 1911	F	Ad	Skull	Kenya, Kikuyu Escarpment, Theita River	A. J. Klein	No data
33307	1 Oct 1911	M	Juv	Skin, skull	Kenya, Kikuyu Escarpment, Theita River	A. J. Klein	No data
33308	1 Oct 1911	M	Ad	Skin, skull	Kenya, Kikuyu Escarpment, Theita River	A. J. Klein	No data
33309	1 Oct 1911	—	Juv	Skull	Kenya, Kikuyu Escarpment, Theita River	A. J. Klein	No data
187392	17 July 1960	F	Ad	Skin, skeleton	Kenya, Nyeri Dist., S. Laikipia Forest, 1 mi N of Bellevue, 7900 ft	R.H. Pine 884	No data
187393	17 July 1960	M	Juv	Skin, skeleton	Kenya, Nyeri Dist., S. Laikipia Forest, 1 mi N of Bellevue, 7900 ft	R.H. Pine 883	860/ 420/ 136/ 34

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<u>9. <i>Colobus guereza matschiei</i></u>							
34704	13 Jan 1913	F	Juv	Skin, skull, skeleton	Kenya, Elgeyo Forest, 7000 ft	J. Richardson Jr. 74	953/ 470/ 145/ —
34705	13 Jan 1913	F	Juv	Skin, skull, skeleton	Kenya, Elgeyo Forest, 7000 ft	J. Richardson Jr. 75	933/ 476/ 147/— (36.75"/ 18.75"/ 5.875"/ —)
34706	14 Jan 1913	F	Juv	Skin, skull, skeleton	Kenya, Elgeyo Forest, 7000 ft	J. Richardson Jr. 76	832/ 394/ 130/— (32.75"/ 15.5"/ 5.875"/ —)
36001	28 Jan 1913	M	Juv	Part skull	Kenya, Elgeyo Forest, 7000 ft	J. Richardson Jr. 62	527/ 270/ 92/— (20.75"/ 10.625"/ 3.625"/ —)
34703	10 Oct 1912	F	—	Skin	Kenya, Uasin-Gishu District	J. Richardson Jr. 3	867/ 546/ 159/— (34.125"/ 21.5"/ 6.25"/ —)
148715	No data	F	—	Skin	Uganda, Karamoja Dist., Mt. Kadam	A.J. Haddow 224	1240/ 685/ 185/ 48
148716	No data	M	—	Skin	Uganda, Karamoja Dist., Mt. Kadam	A.J. Haddow 225	670/ 355/ 120/ 35
148717	No data	M	—	Skin	Uganda, Karamoja Dist. Mt. Kadam	A.J. Haddow 227	1240/ 640/ 190/ 50
148718	No data	F	—	Skin	Uganda, Karamoja Dist., Mt. Kadam	A.J. Haddow 228	1235/ 685/ 185/ 48
148719	No data	M	—	Skin	Uganda, Karamoja Dist., Mt. Kadam	A.J. Haddow 229	1255/ 680/ 190/ 48
148714	No data	M	—	Skin	Uganda, Karamoja Dist., Namalu, ft of Mt. Kadam	A.J. Haddow 223	1215/ 670/ 190/ 45
<u>10. <i>Colobus guereza occidentalis</i></u>							
119767	No data	—	Ad	Skin, skull	Congo (Brazzaville), Kelle Abole	Maclatchy & Malbrant 193	No data
119768	No data	—	Ad	Skin, skull	Congo (Brazzaville), Kelle Abole	Maclatchy & Malbrant 194	No data
119765	No data	—	—	Skin	Congo (Brazzaville), Makoua	Maclatchy & Malbrant 105	No data
119766	No data	—	—	Skin	Congo (Brazzaville), Makoua	Maclatchy & Malbrant 106	No data
119921	No data	—	—	Skin	Congo (Brazzaville), Makoua	Maclatchy & Malbrant 342	No data
146579	No data	F	Ad	Skin	Uganda, Mubende area, 4000 ft	A.J. Haddow UP 149	No data
184265	16 March 1950	M	—	Skin	Uganda, West Nile Dist, Aringa, junction Koich and Kenga Rivers	A.P. Buxton UB 41	1400/ 760/ 184/ 42
184266	16 March 1950	F	—	Skin	Uganda, West Nile Dist, Aringa, junction Koich and Kenga Rivers	A.P. Buxton UB 42	1285/ 725/ 161/ 39
184267	16 March 1950	M	—	Skin	Uganda, West Nile Dist, Aringa., junction Koich and Kenga Rivers	A.P. Buxton UB 43	No data
185268	16 March 1950	F	—	Skin	Uganda, West Nile Dist, Aringa, junction Koich and Kenga Rivers	A.P. Buxton UB 44	1335/ 765/ 176/ 38
184269	16 March 1950	M	Juv	Skin	Uganda, West Nile Dist, Aringa, junction Koich and Kenga Rivers	A.P. Buxton UB 45	660/ 395/ 109/ 32
184249	6 March 1950	F	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 6	1220/ 715/ 160/ 32
184250	6 March 1950	M	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 7	1258/ 715/ 176/ 36
184251	8 March 1950	M	—	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 8	1160/ 710/ 167/ 34
184252	8 March 1950	F	Juv	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 10	612/ 352/ 94/ 32
184253	8 March 1950	M	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 11	1377/ 812/ 186/ 40
184254	8 March 1950	M	—	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 12	1203/ 670/ 161/ 39
184255	8 March 1950	F	—	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 14	1100/ 590/ 174/ 39

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL / T / HF / E
<i>10. Colobus guereza occidentalis (continued)</i>							
184256	9 March 1950	F	—	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 15	No data
184257	9 March 1950	F	—	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 16	No data
184258	9 March 1950	F	—	Skin	Uganda, West Nile Dist., Koboko Co., Godea	A.P. Buxton UB 17	1143/ 683/ 171/ 36
184259	9 March 1950	F	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Ludara	A.P. Buxton UB 18	1275/ 735/ 177/ 38
184260	9 March 1950	F	—	Skin	Uganda, West Nile Dist., Koboko Co., Ludara	A.P. Buxton UB 21	915/ 520/ 137/ 33
184261	14 March 1950	F	—	Skin	Uganda, West Nile Dist., Koboko Co., Utukiliri	A.P. Buxton UB 37	1130/ 675/ 163/ 34
184262	14 March 1950	F	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Utukiliri	A.P. Buxton UB 38	1345/ 755/ 168/ 38
184263	14 March 1950	F	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Utukiliri	A.P. Buxton UB 39	1335/ 750/ 174/ 37
184264	14 March 1950	F	[Ad]	Skin	Uganda, West Nile Dist., Koboko Co., Utukiliri	A.P. Buxton UB 40	1345/ 755/ 171/ 36
52206	1 Sept 1913	M	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Avakubi	Lang & Chapin 2476	1495/ 855/ 205/ 50
52207	1 Sept 1913	F	Juv	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2477	1065/ 640/ 150/ 36
52208	10 Sept 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2480	1440/ 207/ 830/ 41
52209	3 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2482	1475/ 840/ 200/ 48
52210	25 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2483	1350/ 745/ 195/ 43
52211	21 Dec 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2487	1385/ 755/ 195/ 40
52212	23 Feb 1914	M	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2491	1270/ 670/ 190/ 47
52213	10 March 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Bafuka	Lang & Chapin 1238	1275/ 760/ 175/ 35
52214	13 Feb 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 475	1350/ 790/ 175/ 43
52215	13 Feb 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 476	1320/ 765/ 180/ 40
52216	13 Feb 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 477	1410/ 820/ 185/ 37
52217	14 Feb 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 478	1550/ 860/ 202/ 50
52218	14 Feb 1911	F	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 479	1040/ 625/ 150/ 37
52220	14 Feb 1911	F	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 481	1015/ 580/ 165/ 38
52221	15 Feb 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 485	1320/ 715/ 172/ 40
52222	15 Feb 1911	M	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 486	1075/ 635/ 151/ 37
52223	15 Feb 1911	F	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Faradje	Lang & Chapin 489	1350/ 780/ 175/ 40
52224	15 Feb 1911	F	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 490	620/ 388/ 100/ 30
52225	16 Feb 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 491	1320/ 805/ 173/ 42
52226	18 Feb 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 496	1240/ 750/ 165/ 35
52228	18 Feb 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 499	1300/ 760/ 173/ 42
52229	18 Feb 1911	M	[Ad]	Skin, skull, skeleton	DRC, Haut-Congo, Faradje	Lang & Chapin 500	1420/ 885/ 178/ 50
52230	28 Feb 1911	M	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 537	540/ 310/ 80/ 32
52231	9 March 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 587	1420/ 870/ 180/ 40
52233	9 March 1911	F	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 588	1200/ 755/ 180/ 37
52234	14 March 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 602	1410/ 815/ 190/ 41
52235	27 April 1911	F	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 718	720/ 422/ 112/ 34
52236	27 April 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 719	1280/ 760/ 179/ 38
52237	12 Sept 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 854	No data
52238	4 Dec 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 916	1380/ 770/ 181/ 40
52239	4 Dec 1911	M	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 917	590/ 354/ 87/ 34

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<i>10. Colobus guereza occidentalis (continued)</i>							
52240	10 Dec 1911	M	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Faradje	Lang & Chapin 919	1400/ 850/ 192/ 44
52241	10 Dec 1911	F	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Faradje	Lang & Chapin 920	1370/ 815/ 187/ 37
52242	10 Dec 1911	M	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 921	580/ 355/ 94/ 31
52243	26 Oct 1912	F	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1154	885/ 530/ 135/—
52244	26 Oct 1912	M	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 01154	No data
52245	26 Oct 1912	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1155	1310/ 825/ 185/ 43
52246	26 Oct 1912	—	—	Alcoholic	DRC, Haut-Congo, Faradje	Lang & Chapin 01155	No data
52247	26 Oct 1912	F	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1156	1020/ 610/ 140/ 41
52248	26 Oct 1912	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1159	1400/ 820/ 182/ 42
52249	26 Oct 1912	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1160	1485/ 745/ 190/ 36
52250	26 Oct 1912	M	Emb	Alcoholic	DRC, Haut-Congo, Faradje	Lang & Chapin 01160	No data
52251	26 Oct 1912	M	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1161	1310/ 755/ 285/ 41
52252	5 Feb 1912	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 1223	1440/ 830/ 200/ 46
52253	18 April 1912	F	Inf	Skin, skull	DRC, Haut-Congo, Vankerckhovenville	Lang & Chapin 1062	No data
52254	30 Sept 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Yakuluku	Lang & Chapin 861	1490/ 910/ 190/—
52255	30 Sept 1911	—	Emb	Skin, skull	DRC, Haut-Congo, Yakuluku	Lang & Chapin 0861	No data
82424	4 Nov 1926	M	Inf	Skin, skull	DRC, Nord-Kivu, Beni, 3900 ft	J.P. Chapin 83	630/ 375/ 101/—
82423	7 Feb 1927	F	Ad	Skin, skull	DRC, Nord-Kivu, W. base of Ruwenzori	J.P. Chapin 254	1340/ 790/ 100/—
82429	1 May 1927	M	Ad	Skull	DRC, Nord-Kivu, Rutshuru	J.P. Chapin 273	1400/ 740/ 195/—
<i>11. Colobus polykomos</i>							
89393	14 April 1939	M	Ad	Skin, skull	Ivory Coast, Cavally River, Georgetown	G.H.H. Tate 394	1530/ 900/ 200/ 20
89371	24 June 1939	M	Ad	Skin, skull	Ivory Coast, Duékoué	G.H.H. Tate 258	No data
1027	4 Jan 1887 ^a	M		Skin	Liberia	Ward Coll.	No data
265834	24 March 1990	F	Ad	Skull	Liberia, Lofa, 11 km N, 3 km E Ziggida, Gabayea River	R.W. Dickerman 21564	No data
89437	28 July 1940	M	Ad	Skin, skull	Liberia, Sawtown	G.H.H. Tate 49	1590/ 940/ 190/ 25
<i>12. Colobus satanas</i>							
167350	1946	—	—	Skin	Cameroon	F. Hope 26	No data
167651	1934	—	—	Skin	Cameroon, Efulan (53 mi E of Kribi)	F.M. Grisset	No data
167652	1934	—	—	Skin	Cameroon, Efulan (53 mi E of Kribi)	F.M. Grisset	No data
167653	1934	—	—	Skin	Cameroon, Efulan (53 mi E of Kribi)	F.M. Grisset	No data
167655	1934	—	—	Skin	Cameroon, Efulan (53 mi E of Kribi)	F.M. Grisset	No data
89381	13 Aug 1939	M	Ad	Skin, skull	Cameroon, Mfume	G.H.H. Tate 276	1520/ 940/ 190/ 20
236358	1 June 1974	M	Ad	Skin, skull	Cameroon (15 km W of Eseka)	L.W. Robbins 6120	1430/ 835/ 187/ 36
119763	No data	—	—	Skin	Gabon, Kango	Maclatchy & Malbrant 457	No data
119764	28 April 1943	—	—	Skin	Gabon, Kango	Maclatchy & Malbrant 457A	No data

^aDate received.

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<u>13. <i>Colobus vellerosus</i></u>							
No data	No data	—	—	Skin	No data	No data	No data
212604	No data	—	—	Part skin	No data	No data	No data
212605	No data	—	—	Part skin	No data	No data	No data
212606	No data	—	—	Part skin	No data	No data	No data
212607	No data	—	—	Part skin	No data	No data	No data
212608	No data	—	—	Part skin	No data	No data	No data
146610	31 Jan 1950	—	—	Part skin	Ghana, Manso Wassaw	No data	No data
<u>14. <i>Procolobus (Piliocolobus) badius badius</i></u>							
89397	10 April 1940	M	—	Skin	Ivory Coast, Cavally River, Georgetown	G.H.H. Tate 397	1360/ 840/ 180/ 15
89422	1 April 1940	F	Ad	Skull	Ivory Coast, Cavally River, Georgetown	G.H.H. Tate 392	No data
89421	22 March 1940	F	Ad	Skull	Ivory Coast, Cavally River, Niroyé	G.H.H. Tate 391	No data
89372	24 June 1939	M	Ad	Skin, skull	Ivory Coast, Duékoué	G.H.H. Tate 257	1320/ 770/ 180/ 18
167484	18 April 1944	M	Ad	Skin, skull	Liberia, Newtown	H.H. Burgess L 115	1143/ 686/ 152/ — (45"/ 27"/ 6"/ —)
<u>15. <i>Procolobus (Piliocolobus) badius bouvieri</i></u>							
119762	Nov 1945	—	—	Skin	No data	Maclatchy & Malbrant, purchased in Congo (Brazzaville), Ouessou	No data
<u>16. <i>Procolobus (Piliocolobus) badius ellioti</i></u>							
119607	9 July 1937	M	Ad	Skin, skull	DRC, Haut-Congo, Angumu	J.P. Chapin	1410/ 812/ 180/ —
52286	23 June 1914	F	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2515	No data
52290	8 Sept 1909	M	Ad	Skin, skull	DRC, Haut-Congo, Risimu	Lang & Chapin 19	1165/ 665/ 170/ —
52291	8 Sept 1909	F	Ad	Skin, skull	DRC, Haut-Congo, Risimu	Lang & Chapin 20	1135/ 650/ 170/ —
52292	8 Sept 1909	M	Ad	Skin, skull	DRC, Haut-Congo, Risimu	Lang & Chapin 21	1080/ 610/ 165/ —
<u>17. <i>Procolobus (Piliocolobus) badius oustaleti</i></u>							
52256	23 Sept 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Abawe	Lang & Chapin 1456	1195/ 690/ 187/ 37
52257	23 Sept 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Abawe	Lang & Chapin 1457	1320/ 750/ 202/ 38
52258	26 Sept 1913	F	Emb	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1461	No data
52259	27 Sept 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1468	1240/ 705/ 180/ 39
52260	27 Sept 1913	—	Emb	Skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1469	395/ 214/ 65/ —
52261	27 Sept 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1474	1190/ 710/ 173/ 35
52262	30 Sept 1913	M	[Ad]	Skin, hand bones	DRC, Haut-Congo, Akenge	Lang & Chapin 1537	1335/ 770/ 170/ 40
52263	1 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1544	1200/ 710/ 170/ 35
52264	1 Oct 1913	F	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1548	1000/ 600/ 149/ 30
52265	1 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1549	1300/ 745/ 186/ 38
52266	1 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1552	1140/ 660/ 178/ 39
52267	2 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1562	1250/ 700/ 175/ 35
52269	4 Oct 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1594	920/ 530/ 145/ 23
52270	5 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1609	1220/ 670/ 175/ 36
52271	7 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1625	1240/ 710/ 175/ 40
52272	9 Oct 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1663	1030/ 580/ 167/ 35
52273	10 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1668	1115/ 610/ 174/ 35
52274	10 Oct 1913	F	Inf	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1669	440/ 240/ 73/ 26
52275	13 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1695	1220/ 696/ 178/ 39

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<i>17. Procolobus (Piliocolobus) badius oustaleti (continued)</i>							
52276	15 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1723	1260/ 740/ 178/ 42
52277	18 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1759	1180/ 725/ 180/ 35
52278	18 Oct 1913	M	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Akenge	Lang & Chapin 1760	1350/ 800/ 190/ 40
52280	20 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1786	1450/ 645/ 180/ 39
52281	21 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1798	1350/ 790/ 192/ 38
52282	21 Oct 1913	M	Juv	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1801	1100/ 625/ 175/ 36
52283	22 Oct 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1812	1290/ 780/ 188/ 38
52284	30 Oct 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Akenge	Lang & Chapin 1847	1240/ 690/ 192/ 41
52285	23 June 1914	F	Ad	Skin, skull	DRC, Haut-Congo, Avakubi	Lang & Chapin 2512	1260/ 720/ 196/ 38
52287	11 March 1913	M	Ad	Skin, skeleton	DRC, Haut-Congo, Bafuka	Lang & Chapin 1239	1280/ 735/ 193/ 40
52288	11 March 1913	M	Ad	Skull	DRC, Haut-Congo, Bafuka	Lang & Chapin 01239	No data
52289	27 July 1914	M	Ad	Skin, skull	DRC, Haut-Congo, Bafwabaka	Lang & Chapin 2475	1235/ 690/ 190/ 40
52295	16 July 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 807	1290/ 690/ 190/ 41
52297	16 July 1911	—	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 0808	No data
52298	16 July 1911	M	Ad	Skin, skeleton	DRC, Haut-Congo, Faradje	Lang & Chapin 809	1320/ 732/ 186/ 42
52299	16 July 1911	M	Juv	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 0809	No data
52300	22 July 1911	F	[Ad]	Skin	DRC, Haut-Congo, Faradje	Lang & Chapin 817	1235/ 725/ 185/ 40
52301	23 July 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 818	1295/ 750/ 187/ 42
52302	23 July 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 819	1335/ 770/ 180/ 39
52303	26 July 1911	M	Ad	Skin, skeleton	DRC, Haut-Congo, Faradje	Lang & Chapin 871	1310/ 785/ 200/ 40
52304	23-30 Nov 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 878	No data
52305	23-30 Nov 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 879	No data
52306	23-30 Nov 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 880	No data
52307	23-30 Nov 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 881	No data
52308	23-30 Nov 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 882	No data
52309	23-30 Nov 1911	F	Juv	Skin	DRC, Haut-Congo, Faradje	Lang & Chapin 883	No data
52310	23-30 Nov 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 884	No data
52311	23-30 Nov 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 885	No data
52312	23-30 Nov 1911	F	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 886	No data
52314	23-30 Nov 1911	M	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 888	No data
52315	23-30 Nov 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 889	No data
52316	23-30 Nov 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 890	No data
52317	23-30 Nov 1911	F	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 891	No data
52318	23-30 Nov 1911	—	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 892	No data
52319	23-30 July 1911	F	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 893	No data
52320	23-30 July 1911	F	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 894	No data
52321	1 Dec 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 907	1290/ 693/ 188/ 32
52322	1 Dec 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 908	1315/ 717/ 193/ 39
52323	1 Dec 1911	F	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 909	1270/ 690/ 183/ 38
52324	2 Dec 1911	M	[Ad]	Skin	DRC, Haut-Congo, Faradje	Lang & Chapin 910	1315/ 713/ 203/ 43
52325	2 Dec 1911	F	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 0910	No data
52326	2 Dec 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 911	1355/ 725/ 196/ 39
52327	2 Dec 1911	F	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 0911	No data
52328	2 Dec 1911	F	Inf	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 912	505/ 286/ 89/ 28
52329	3 Dec 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 913	1265/ 660/ 193/ 40
52330	3 Dec 1911	F	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 0913	1225/ 650/ 185/ 35
52331	3 Dec 1911	M	Ad	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 914	1195/ 607/ 177/ 38
52332	3 Dec 1911	F	Juv	Skin, skull	DRC, Haut-Congo, Faradje	Lang & Chapin 915	1134/ 645/ 183/ 38
52333	27 Oct 1912	F	Ad	Skull	DRC, Haut-Congo, Faradje	Lang & Chapin 01156	No data
52334	14 Feb 1910	M	Ad	Skin, skull, skeleton	DRC, Haut-Congo, Gamangui	Lang & Chapin 166	1235/ 680/ 185/ 70
52335	15 Feb 1910	M	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 170	1140/ 650/ 178/—

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<u>17. <i>Procolobus (Piliocolobus) badius oustaleti (continued)</i></u>							
52336	15 Feb 1910	M	Ad	Skin, skull	DRC, Haut-Congo, Gamangui	Lang & Chapin 172	1130/ 615/ 172/—
52339	20 July 1914	M	Ad	Skull	DRC, Haut-Congo, Medje	Lang & Chapin 02474	No data
82426	3 Oct 1927	F	Ad	Skull	DRC, Haut-Congo, Mokoko	J.P. Chapin 47	1180/ 650/ 174/—
52340	20 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 1974	1250/ 600/ 187/ 72
52341	23 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2023	1240/ 750/—/ 35
52342	24 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2039	1340/ 760/ 198/ 40
52343	24 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2044	1340/ 775/ 193/ 40
52344	24 Nov 1913	F	Juv	Skin	DRC, Haut-Congo, Niapu	Lang & Chapin 2045	765/ 475/ 113/ 39
52345	25 Nov 1913	F	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2057	1215/ 710/ 179/ 38
52346	26 Nov 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2085	1300/ 710/ 192/ 41
52347	2 Dec 1913	M	Ad	Skin, skull	DRC, Haut-Congo, Niapu	Lang & Chapin 2159	1285/ 715/ 195/ 41
<u>18. <i>Procolobus (Piliocolobus) badius rufomitratu</i></u>							
54277	No data	—	Juv	Skin, skull	Kenya, Tana River	K. Caldwell	No data
54278	No data	F	Ad	Skin, skull	Kenya, Tana River	K. Caldwell	No data
54280	No data	M	Ad	Skin, skull, skeleton	Kenya, Tana River	K. Caldwell	No data
<u>19. <i>Procolobus (Piliocolobus) badius tephrosceles</i></u>							
248477	1 Dec 1971	F	Juv	Part skull	Uganda, Kibale Forest, Kanyawara, 5000 ft	T.T. Struhsaker	No data
248476	26 July 1970	F	Ad	Skull	Uganda, Kibale Forest, Kanyawara, 5000 ft	T.T. Struhsaker	No data
248478	14 Nov 1972	—	Ad	Part skull	Uganda, Kibale Forest, near Dubona camp	T.T. Struhsaker	No data
<u>20. <i>Procolobus (Piliocolobus) badius tholloni</i></u>							
52293	16 July 1909	M	Juv	Skin, skull	DRC, Bandundu, Bolobo	Lang & Chapin 2	607/ 337/ 100/—
52294	16 July 1909	—	Ad	Skull	DRC, Bandundu, Bolobo	Lang & Chapin 3	No data
52337	17 Dec 1914	F	Ad	Skin, skull	DRC, Equateur, Lukolela	Lang & Chapin 7000	1270/ 690/ 170/ 35
52338	17 Dec 1914	F	Juv	Skin, skull	DRC, Equateur, Lukolela	Lang & Chapin 7001	1040/ 585/ 150/ 34
86708	2 Sept 1930	F	Ad	Skin, skull	DRC, Equateur, Lukolela	F. Edson 3rd 2086	1240/ 680/ 176/ 20
86709	5 Aug 1930	F	Ad	Skin, skull, part skeleton	DRC, Equateur, Lukolela	F. Edson 3rd 2020	1160/ 676/ 165/ 25
86899	6 Dec 1930	F	Ad	Skull	DRC, Equateur, Lukolela, Plaine de Tervueren	J. P. Chapin 2197	No data
<u>21. <i>Procolobus (Procolobus) verus</i></u>							
89438	1 Aug 1940	F	Ad	Skin, skull	Liberia, Sawtown	G.H.H. Tate 425	1110/ 620/ 145/ 20
89439	1 Aug 1940	M	Ad	Skin, skull	Liberia, Sawtown	G.H.H. Tate 427	1120/ 620/ 145/ 20
<u>22. Zoo Specimens and Specimens Without Data (<i>Colobus</i> sp.)</u>							
200851	26 Nov 1927	F	—	Wax cast of hand Mold of hand and foot (2)	No data	NYZS	No data
<u>23. Zoo Specimens and Specimens Without Data (<i>Colobus angolensis</i>)</u>							
165021	July 1954	—	Ad	Skin, skull	No data	NYZS	No data
119769	Nov 1945	—	—	Skin	Congo	Maclatchy & Malbrant	No data
55769	7 Feb 1930	—	—	Skin	Tanzania	Rockefeller, Murphy & Moses	No data
1026	No data	—	—	Mounted	East Africa	Ward Coll.	No data

APPENDIX 1
(Continued)

Catalog number	Date	Sex	Age	Description	Locality	Remarks	Measurements: TL /T /HF /E
<u>24. Zoo Specimens and Specimens Without Data (<i>Colobus guereza</i>)</u>							
148518	27 Feb 1952	M	Inf	Skin, skull	No data	NYZS	No data
A2270	No data	—	—	Mounted	No data	No data	No data
A2272	No data	—	—	Mounted	No data	No data	No data
A2273	No data	—	—	Mounted	No data	No data	No data
131	No data	—	—	Skull	East Africa	Verreaux Coll.	No data
<u>25. Zoo Specimens and Specimens Without Data (<i>Procolobus badius</i>)</u>							
119618	29 Dec 1937	M	Ad	Skull	No data	NYZS	No data
187220	11 Oct 1961	M	Ad	Skin, skull	No data	NYZS	1170/ 601/ 160/ 28
215185	2 Oct 1972	—	Juv	Skull, skeleton	No data	ASPCA	No data
215186	No data	M	Juv	Skull, skeleton	No data	ASPCA	No data
238455	6 May 1974	—	Juv	Skull, skeleton	No data	ASPCA	No data
244689	No data	—		Skull	No data	US Fish and Wildlife Service	No data